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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,878	10/09/2003	Vincent L. Chiang	50617.C1/C-3532.0	8100
22428 7590 05/30/2007 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			EXAMINER BAUM, STUART F	
			ART UNIT 1638	PAPER NUMBER
			MAIL DATE 05/30/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

### Application No.

10/681,878

### Applicant(s)

CHIANG ET AL.

### Examiner

Stuart F. Baum

### Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 27 and 29 is/are pending in the application.
- 4a) Of the above claim(s) 27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2003 and 29 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. The amendment and §1.132 Declaration filed 3/20/2007 have been entered.

***RCE Acknowledgment***

2. The request filed on 3/20/2007 for a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114, based on parent Application No. 10/681,878 is acceptable and a RCE has been established. An action on the RCE follows.

3. Claims 27 and 29 are pending.

4. Applicants have amended claim 27 to be drawn to SEQ ID NO:11. It is noted that in the Office action mailed 1/30/2006, the Office pointed out that the original claim 27 was drawn to SEQ ID NO:6, which is an amino acid sequence, even though the claim specified a DNA sequence. Applicants then amended claim 27 to be drawn to SEQ ID NO:10, a DNA sequence.

The general policy of the Office is not to permit the applicant to shift to claiming another invention after an election is once made and action given on the elected subject matter.

Note that the applicant cannot, as a matter of right, file a request for continued examination (RCE) to obtain continued examination on the basis of claims that are independent and distinct from the claims previously claimed and examined (i.e., applicant cannot switch inventions by way of an RCE as a matter of right). When claims are presented which the examiner holds are drawn to an invention other than the one elected, he or she should treat the claims as outlined in MPEP § 821.03.

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5. Claim 27 has been amended to be drawn to SEQ ID NO:11, which is an invention that is independent or distinct from the invention originally claimed for the following reasons:

Nucleotide sequences either encoding different proteins or specifying specific expression patterns are structurally distinct chemical compounds and are unrelated to one another, as are different proteins structurally distinct chemical compounds and unrelated to one another. These sequences are thus deemed to normally constitute **independent and distinct** inventions within the meaning of 35 U.S.C. 121. Absent evidence to the contrary, each such sequence is presumed to represent an independent and distinct invention, subject to a restriction requirement pursuant to 35 U.S.C. 121 and 37 CFR 1.141 et seq (see MPEP 803.04 and 2434). This requirement is not to be construed as a requirement for an election of species, since each nucleotide and amino acid sequence is not a member of a single genus of invention, but constitutes an independent and patentably distinct invention.

Applicants provisionally elected Group VIII, drawn to SEQ ID NO:6 which was later changed to SEQ ID NO:10, as discussed above, in the response filed 11/10/2005.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 27 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

6. Claim 29 is examined in the present office action.

*New Matter*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 29 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims have been amended to recite “wherein said promoter region directs gene expression and includes two GGTAGGTA binding sites”. Applicants fail to point to support for the phrase in the instant specification. Upon a cursory search of the specification, support could not be found. Applicants are required to point to support for “wherein said promoter region directs gene expression and includes two GGTAGGTA binding sites” or to amend the claims to delete the NEW MATTER.

*Written Description*

8. Claim 29 remains rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This rejection is maintained for the reasons of record set forth in the Official action mailed 1/30/2006. Applicant’s arguments filed 3/20/2007 have been fully considered but they are not persuasive.

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Applicants contend extensive disclosure of the 4CL1B promoter of SEQ ID NO:11 is disclosed (page 4 of Response, 2<sup>nd</sup> paragraph). Applicants disclose the sequence GGTAGGTA is a predicted MYB binding site as disclosed by Goicoechea et al (2005). Applicants submit a declaration by Dr. William Rottmann stating the structural/functional features of the claimed 4CL promoter (*Ibid*). Applicants have submitted as Exhibit B, an alignment of the 4CL1B promoter of SEQ ID NO:11 and the *Pinus radiata* 4CL promoter. Applicants contend the sequences show similarity in several regions and are over 95% identical in the region 630-1254 and 1404-2221 of SEQ ID NO:11.

The Office contends Applicants' claim is drawn to any gymnosperm 4CL promoter, wherein the promoter comprises two GGTAGGTA binding sites. The Office contends, that to satisfy the written description requirement for the genus claim, Applicants are to disclose a representative number of promoter sequences from 4CL genes from a representative number of gymnosperm plants at the time of filing. Applicants can also disclose essential regions of gymnosperm 4CL promoters that are required for correct spatial and temporal promoter activity. A caveat of satisfying the written description requirement, is for Applicant to be in possession of the representative sequences or be in possession of the essential regions at the time of filing of the instant application. The Office contends that the Rottmann declaration mainly addresses SEQ ID NO:11, which is subject matter not recited in claim 29.

***Enablement***

9. Claim 29 remains rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. This rejection is maintained for the reasons of record set forth in the Official action mailed 1/30/2006. Applicant's arguments filed 3/20/2007 have been fully considered but they are not persuasive.

Applicants contend Goicoechea et al (2005) disclose that a MYB2 transcription factor binds to a G(G/T)T(A/T)GGT(A/G) binding site (page 5 of Response, 3<sup>rd</sup> paragraph).

Applicants contend the claimed sequence includes two GGTAGGTA motifs which are predicted to be MYB binding sites. The declaration of Dr. Rottmann discloses that since the filing of the present application, three different pine 4CL promoter fragments were tested and showed xylem-preferred expression of the reporter gene (page 3 of Declaration, #8). Dr. Rottmann discloses that a region corresponding to bases 630-1254 and 1404-2221 of SEQ ID NO:11 exhibited 95% sequence identity with another *Pinus radiata* 4CL promoter (*Ibid*).

The Office contends Applicants' disclosure is not commensurate with the scope of the claimed invention. Applicants' claim is drawn to any gymnosperm 4CL promoter comprising two GGTAGGTA binding sites but Applicants have only disclosed the promoter region of a 4CL gene of SEQ ID NO:10. One skilled in the art would not be apprised of sequence information to enable the identification and/or isolation of any gymnosperm 4CL promoter comprising two GGTAGGTA binding sites without undue trial and error experimentation. As stated in the office action mailed 1/30/2006, the state-of-the-art teaches promoters consist of domains that

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individually regulate spatial and temporal expression in plants. Isolating a promoter without the full complement of domains alters the expression activity of the promoter. Applicants have only disclosed one domain, which is a purported MYB binding site. Applicants have not disclosed other domains that are essential for the proper spatial and temporal expression activity of the claimed sequence. Therefore, given the breadth of the claims; the lack of guidance and examples; the unpredictability and the state-of-the-art as discussed in the office action mailed 1/30/2006, undue experimentation would be required by one skilled in the art to practice the broadly claimed invention.

10. No claim is allowed.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

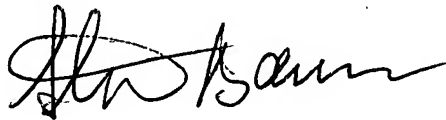


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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stuart F. Baum whose telephone number is 571-272-0792. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached at 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

A handwritten signature in black ink, appearing to read 'Stuart F. Baum', is positioned above the typed name and title.

Stuart F. Baum Ph.D.  
Primary Examiner  
Art Unit 1638  
May 17, 2007

**STUART F BAUM, PH.D.**  
**PRIMARY EXAMINER**